

PHILIPSON, N.

Appl. No. To be assigned

US National Phase of PCT/SE03/00109

July 21, 2004

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(currently amended) A drive unit comprising a rolling means intended to be in frictional engagement with a surface over which said drive unit is intended to move, a first driving means and a second driving means, co-operatively operable to provide both propulsion and steering of said drive unit while eliminating slippage between said rolling means and said surface, ~~characterized in that~~wherein said first driving means is arranged on a rotatable support means rotatable about a center axis and is operable to rotate said rolling means about a rolling axis, wherein said rolling means is displaced a predetermined distance from said center axis, wherein said second driving means is operable to rotate said support means about said center axis, allowing said support means and said rolling means to rotate with respect to said drive unit.

2.(currently amended) A drive unit according to Claim 1, ~~characterized in that~~wherein said rolling axis is perpendicular to said center axis.

3.(currently amended) A drive unit according to ~~anyone of Claims 1-2~~Claim 1, ~~characterized in that~~wherein said support means on its circumference is provided with a sprocket means driven by said second driving means by way of a transmission means.

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4.(currently amended) A drive unit according to Claim 3, ~~characterized in that~~wherein said transmission means is a chain which is engaged with said sprocket means and a toothed wheel driven by said second driving means.

5.(currently amended) A drive unit according to Claim 4, ~~characterized in that~~wherein said drive unit also comprises a tension wheel which is engaged with said chain.

6.(currently amended) A drive unit according to Claim 3, ~~characterized in that~~wherein said transmission means is a toothed wheel driven by said second driving means, wherein said toothed wheel is engaged with said sprocket means.

7.(currently amended) A drive unit according to ~~anyone of Claims 1-6~~Claim 1, ~~characterized in that~~wherein said drive unit also comprises a planetary gear-box mounted on said first driving means, and in connection with said rolling means.

8.(currently amended) A drive unit according to ~~anyone of Claims 1-7~~Claim 1, ~~characterized in that~~wherein said rotatable support means is supported by a ball bearing means.

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9.(currently amended) A drive unit according to ~~anyone of Claims 1-8~~Claim

1, ~~characterized in that~~wherein said first and second driving means, each is a servomotor.

10.(currently amended) A drive unit according to ~~anyone of Claims 1-9~~Claim

1, ~~characterized in that~~wherein said rolling means is a wheel.

11.(currently amended) A drive unit according to ~~anyone of Claims 1-10~~Claim

1, ~~characterized in that~~wherein said support means is a round plate.

12.(currently amended) A drive unit according to ~~anyone of Claims 1-11~~Claim

1, ~~characterized in that~~wherein said drive unit also comprises a rotation limiter arranged in the vicinity of said rotatable support means.

13.(currently amended) A drive unit according to ~~anyone of Claims 1-12~~Claim

1, ~~characterized in that~~wherein said drive unit also comprises a sensor means arranged in the vicinity of said rotatable support means, which sensor means is operable to detect the position of said rotatable support means.

14.(currently amended) A powered vehicle comprising a chassis, at least three rolling means mounted on said chassis for engagement with a surface over which said

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vehicle is to move, ~~characterized in that~~wherein at least two of said rolling means each is a drive unit according to ~~any one of Claims 1-13~~Claim 1.

15.(currently amended) A powered vehicle according to Claim 14,
~~characterized in that~~wherein said powered vehicle comprises four rolling means, each situated at a corner of said chassis, and in that two of said four rolling means are drive units, each arranged at two diagonally arranged corners of said powered vehicle.

16.(currently amended) A powered vehicle according to Claim 14 ~~or Claim 15~~,
~~characterized in that~~wherein said powered vehicle also comprises a wireless communication means for receiving control signals from a remote computer system to control said drive